

REMARKS/ARGUMENTS

In the Office Action, the Examiner continues to reject the claims based on Laverty in view of Weisgerber. As will be further discussed below, Applicant specifically addresses the Examiner's further arguments in the "Response to Arguments" section of the Office Action for the Examiner's further consideration.

In Applicant's invention, with reference to Figure 1, at least two intake linings 27, 28 on a radially internal end 18 of a stationary guide vane 16 are disposed opposite at least two seal projections 25, 26 on a rotor 12.

First, in the Examiner's arguments on page 3 of the Office Action at para. 8, the Examiner argues that "Weisgerber et al. teaches a similar seal to that of Laverty Fig. 4 and Laverty Fig. 5". Applicant respectfully submits that it is precisely because Weisgerber and Laverty do not teach similar seals that the Examiner's argument to modify Laverty's seal by Weisgerber's seal cannot be made.

Laverty discloses a *labyrinth seal* (col. 3, lines 11-14). *Labyrinth seals do not have intake linings*. As disclosed in Laverty, labyrinth seals 28 include smooth, closed, sealing surfaces 34 which cooperate with sealing projections 32. Consequently, these are *contactless* labyrinths with *corresponding gaps* between the sealing projections 32 and the sealing surfaces 34. For leakage reduction, additional flow turning means 36 are provided. Col. 3, lines 15-21. Thus, these gaps between the sealing projections 32 and sealing surfaces 34, and flow turning means 36, in Laverty provide a principle of operation where a reverse *flow* of a small portion of the *working medium* from the flow path 20 provides the sealing effect of the labyrinth seal. Therefore, Applicant respectfully submits that this is *why* Laverty's labyrinth seal *does not include two intake linings*. The Examiner acknowledges that Laverty's labyrinth seal does not include two intake linings configured as honeycomb structures disposed opposite the seal projections in the Office Action. Para. 5.

However, the Examiner argues that it would have been obvious to modify Laverty's labyrinth seal by providing intake linings configured as honeycomb structures disposed opposite the seal projections of Laverty as taught by Weisgerber. Office Action para. 9. Again, Applicant respectfully submits that

any such attempted modification of Laverty would change the principle of operation of Laverty and render it unsatisfactory for its intended purpose.

In contrast to the Examiner's argument that Weisgerber teaches a similar seal to that of Laverty, Applicant respectfully submits that Weisgerber discloses a completely different type of seal than Laverty. Whereas Laverty *requires* a *reverse air flow* created by the gaps between the sealing projections 32 and the sealing surfaces 34 to provide the sealing effect, Weisgerber's seal prevents such a flow to provide the sealing effect. In Weisgerber, honeycomb block 226 is engaged by seal teeth 228 "to prevent a reverse circular air flow pattern". Col. 7, lines 30-40.

Therefore, Applicant respectfully submits that if the honeycomb structures engaging the seal teeth of Weisgerber were included in Laverty it would change the principal of operation of the *labyrinth seal* of Laverty, which is impermissible. Weisgerber's structure would preclude the reverse flow required in Laverty's disclosed labyrinth seal. Therefore, Applicant respectfully submits that it is impermissible to attempt to modify Laverty's labyrinth seal, which operates on the principle of a reverse flow in the seal, by Weisgerber's honeycomb seal which prevents such a reverse flow.

In response to the Examiner's further specific arguments in the Response to Arguments section, Applicant respectfully submits that even if Weisgerber only discloses one intake lining (honeycomb block 226), and even if it would have been further obvious to provide two such honeycomb blocks, as discussed above, Applicant's argument is that there could be no reason to include the two honeycomb blocks in Laverty's labyrinth seal. Inclusion of such honeycomb blocks in Laverty would defeat the principle of operation of Laverty.

Apparently further in support of this argument by the Examiner that it would have been obvious to include two of the honeycomb blocks of Weisgerber in Laverty, the Examiner argues that "it appears nearly improbable and nonsensical to Examiner for one to provide only one intake lining for Laverty given Laverty's structure." In response, as discussed above, Applicant respectfully submits that it would be nonsensical to include two honeycomb

blocks, or one honeycomb block, or any honeycomb blocks, of Weisgerber in Lavery given Lavery's structure.

It appears that the Examiner may have slightly misunderstood Applicant's argument with the Examiner's mis-characterization of Applicant's argument that "Applicant argues two intake linings is not discloses [sic] either by Lavery alone or in combination with Weisgerber et al." Applicant's argument is not that Weisgerber only discloses a single honeycomb block, and as such, the modified Lavery reference could not include two honeycomb blocks. Rather, Applicant's argument is that there would be no reason to include any honeycomb blocks of Weisgerber in Lavery's labyrinth seal to result in two honeycomb blocks in a modified Lavery labyrinth seal.

Lastly in the Examiner's arguments in the Response to Argument section, the Examiner argues that Weisgerber's honeycomb block serves to improve flow impedance and that Lavery also seeks to provide maximum impedance to flow. However, even if both Weisgerber's seal and Lavery's labyrinth seal seek to provide a seal (impedance to flow), they achieve this seal through very different principles of operation. As discussed above, Lavery's seal *requires* a *reverse air flow* created by the gaps between the sealing projections 32 and the sealing surfaces 34 to provide the sealing effect and Weisgerber's seal *prevents* a *reverse circular air flow pattern* by honeycomb block 226 engaging with seal teeth 228 to provide the sealing effect. Therefore, Applicant respectfully submits that even if both Lavery's seal and Weisgerber's seal seek impedance to flow, they achieve this impedance to flow by very different structures, and as such, there would be no motivation to modify the structure of Lavery by the structure of Weisgerber.

Therefore, Applicant respectfully submits that independent claims 9 and 17 are allowable over the cited references for at least these additional reasons.

Applicant respectfully submits that the application is in condition for allowance. If there are any questions regarding this Response or this application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

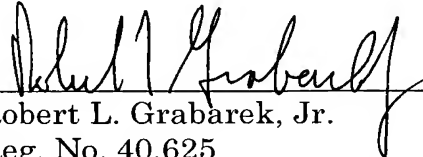
As provided for above, this paper includes a Petition for an Extension of Time sufficient to effect a timely response. Please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket 011235.57478US).

Respectfully submitted,

CROWELL & MORING LLP

Dated: July 19, 2011

By

A handwritten signature in black ink, appearing to read "Robert L. Grabarek, Jr.", written over a horizontal line.

Robert L. Grabarek, Jr.

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